



Smart Sensing Solutions Since 1954

MINI-EYE™



Miniature Sensor

MINI-EYE™

The TRI-TRONICS MINI-EYE™ sensors are designed to be low in cost and high in value. The sensors are waterproof and are enclosed in a high-impact plastic housing.

Through-Beam Models utilize a separate light source and receiver for Beam Break sensing. Recommended for long-range sensing or for use in environments where dust or dirt buildup may cover the lens.

The sensors provide a narrow beam path from the light source to the receiver and are perfect for sensing small gaps or precise sensing tasks, which is critical when attempting to resolve the exact location of passing objects. The light source requires a simple two-wire connection and functions independently of other receivers.

Retroreflective Models operate in either the Beam Make or Beam Break sensing mode and are designed to be used with a prismatic reflector. Detection occurs when the light beam is broken by a passing target.

The visible, red, polarized model helps to prevent proying or responding to undesirable light reflecting from shiny objects, such as cans, glass, and clear plastic. The infrared light source model is recommended for long-range sensing.

Proximity Models are designed for close range sensing tasks and operate by detecting the reflected light from targeted objects.

The red LED light source is recommended for detecting transparent objects, such as clear glass or plastic bottles. The invisible infrared LED light source is recommended for general purpose sensing tasks.

All MINI-EYE™ sensors are available with a quick disconnect M8 or M12 4-PIN connector or a potted 6' (1.8 m) 4-wire cable, and with a red or infrared LED light source. The MINI-EYE is easy to set up and can operate in either the light ON or dark ON mode. For light ON operation, connect the white wire to negative and for dark ON operation, connect the white wire to positive.

The MINI-EYE™ is a tough little sensor that outperforms anything in its price range.



Features

- 18mm mounting
- Laser through-beam
- NPN or PNP output transistor
- Fixed Optics - Proximity, Retroreflective, Polarized Retroreflective, and Through-Beam
- Selectable Light ON or dark ON operation
- High immunity to ambient light and strobes
- Waterproof with high-impact housing
- Available in 6 foot 4-Wire cable, M8 4-Pin connector, or M12 4-Pin 6 inch pigtail
- Reverse polarity protection
- Short circuit protection
- Power-up output suppression
- 5VDC models available (please consult factory)

Benefits


- Easy to use
- Lower inventory costs
- Lower maintenance costs
- Flexible

Applications

- Presence/Absence Detection
- Material Handling
- Counting
- Sorting
- Orientation
- Web Break Detection

Features

MINI-EYE™



GAIN (SENSITIVITY)
Screwdriver adjustment
(Adjustment N/A on receiver models)

POWER INDICATOR
GREEN LED illuminates when power is ON.

OUTPUT STATUS INDICATOR
RED LED illuminates when outputs are ON.
(N/A on Light Source models)

LED LIGHT SOURCE



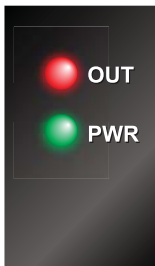
- LED, Red = 660nm
- LED, Infrared = 880nm
- Laser, Red = 650nm, Class 1

CONNECTION
Choice of: Built-in 6ft (1.8m) cable, M8 4-pin connector, or M12 4-pin connector.

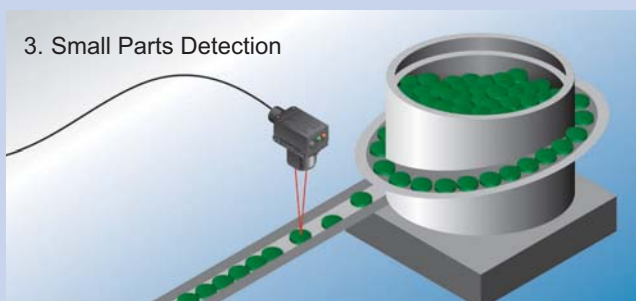
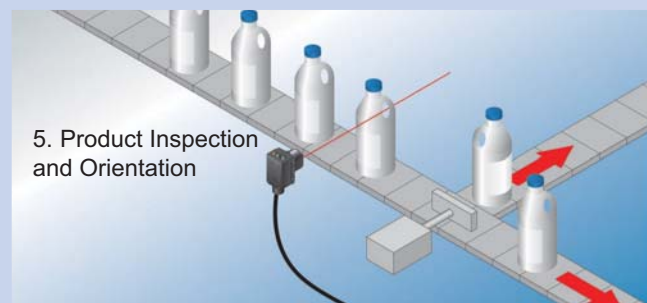
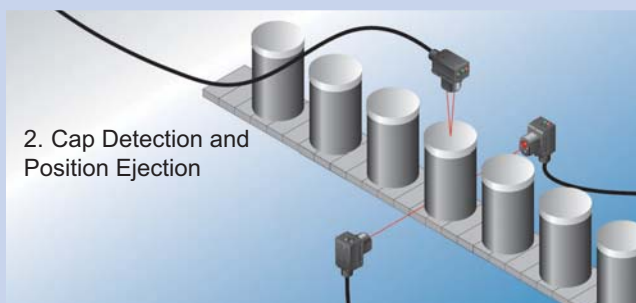
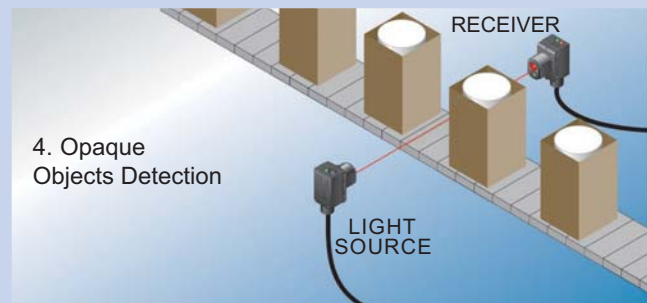
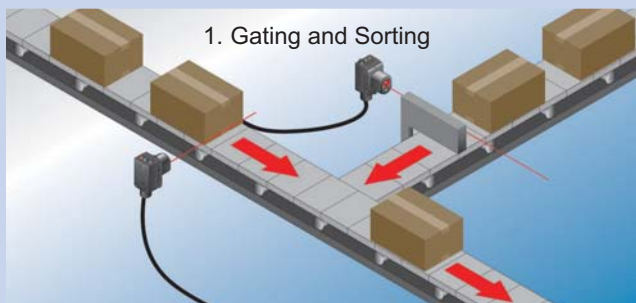
18mm Mounting



18mm nNut included with 18mm models.

Sensor	Light Source	Receiver
		

Typical Applications



HOW TO SPECIFY				
MODELS		DESCRIPTION	RANGE	
STANDARD	18mm	SHORT RANGE PROXIMITY	STANDARD	18mm
MIVC	MIVC-18	IR, NPN, connector	5in (127.0mm)	6in (152.4mm)
MIV	MIV-18	IR, NPN, cabled	5in (127.0mm)	6in (152.4mm)
MRVC	MRVC-18	Red, NPN, connector	4in (101.6mm)	5in (127.0mm)
MRV	MRV-18	Red, NPN, cabled	4in (101.6mm)	5in (127.0mm)
PMIVC	PMIVC-18	IR, PNP, connector	5in (127.0mm)	6in (152.4mm)
PMIV	PMIV-18	IR, PNP, cabled	5in (127.0mm)	6in (152.4mm)
PMRVC	PMRVC-18	Red, PNP, connector	4in (101.6mm)	5in (127.0mm)
PMRV	PMRV-18	Red, PNP, cabled	4in (101.6mm)	5in (127.0mm)
LONG RANGE PROXIMITY				
MIPC	MIPC-18	IR, NPN, connector	20in (508.0mm)	20in (508.0mm)
MIP	MIP-18	IR, NPN, cabled	20in (508.0mm)	20in (508.0mm)
MRPC	MRPC-18	Red, NPN, connector	14in (355.6mm)	8in (203.2mm)
MRP	MRP-18	Red, NPN, cabled	14in (355.6mm)	8in (203.2mm)
PMIPC	PMIPC-18	IR, PNP, connector	20in (508.0mm)	20in (508.0mm)
PMIP	PMIP-18	IR, PNP, cabled	20in (508.0mm)	20in (508.0mm)
PMRPC	PMRPC-18	Red, PNP, connector	14in (355.6mm)	8in (203.2mm)
PMRP	PMRP-18	Red, PNP, cabled	14in (355.6mm)	8in (203.2mm)
RETROREFLECTIVE				
MIRC	MIRC-18	IR, NPN, connector	12ft (3.7m)	15ft (3.8m), 35ft (8.8m)*
MIR	MIR-18	IR, NPN, cabled	12ft (3.7m)	15ft (3.8m), 35ft (8.8m)*
MRRC	MRRC-18	Red, Polarized, NPN, connector	3.5ft (0.9m), 8.5ft (2.2m)	6ft (1.8m), 15ft (4.6m)
MRR	MRR-18	Red, Polarized, NPN, cabled	3.5ft (0.9m), 8.5ft (2.2m)	6ft (1.8m), 15ft (4.6m)
PMIRC	PMIRC-18	IR, PNP, connector	12ft (3.7m)	15ft (3.8m), 35ft (8.8m)*
PMIR	PMIR-18	IR, PNP, cabled	12ft (3.7m)	15ft (3.8m), 35ft (8.8m)*
PMRRC	PMRRC-18	Red, Polarized, PNP, connector	3.5ft (0.9m), 8.5ft (2.2m)	6ft (1.8m), 15ft (4.6m)
PMRR	PMRR-18	Red, Polarized, PNP, cabled	3.5ft (0.9m), 8.5ft (2.2m)	6ft (1.8m), 15ft (4.6m)
THROUGH-BEAM				
LIGHT SOURCE (Range to receivers below)				
MLSIC	MLSIC-18	Infrared, connector	65ft (19.8m)	65ft (19.8m)
MLSI	MLSI-18	Infrared, cabled	65ft (19.8m)	65ft (19.8m)
MLSRC	MLSRC-18	Red, connector	45ft (13.7m)	15ft (4.6m)
MLSR	MLSR-18	Red, cabled	45ft (13.7m)	15ft (4.6m)
RECEIVERS (Range w/ receivers below)				
MRC	MRC-18	NPN, connector		
MR	MR-18	NPN, cabled		
PMRC	PMRC-18	PNP, connector		
PMR	PMR-18	PNP, cabled		
LASER THROUGH-BEAM				
LIGHT SOURCE				
MLZRC	MLZRC-18	Red, connector	60ft (18.2m)	60ft (18.2m)
MLZR	MLZR-18	Red, cabled	60ft (18.2m)	60ft (18.2m)
RECEIVERS				
MLRC	MLRC-18	NPN, connector		
MLR	MLR-18	NPN, cabled		
PMLRC	PMLRC-18	PNP, connector		
PMLR	PMLR-18	PNP, cabled		

*AR82 High performance reflector.

Note: Standard connector models utilize an M8 4-pin connector. M12 4-pin 6in pigtails are built to order.
Ex. MIVC-18M12

NOTE: Retroreflective sensors equipped with a red light source are polarized to prevent proxing off shiny objects. Proximity test utilized a 90% reflective white target. Retroreflective tests utilized a 3in diam, round reflector, Model AR3.

NOTE: Receivers can be used with either IR or Red Light Sources.

Accessories

4-Wire Nano Cable, M8



- GEC-6**
6ft (1.8m) cable

- GEC-15**
15ft (4.6m) cable

- GEC-25**
25ft (7.62m) cable



- RGEC-6**
6ft (1.8m) right angle

- RGEC-15**
15ft (4.6m) right angle

- RGEC-25**
25ft (7.6m) right angle

4-Wire Extension Cable, M8



- GEX-9**
9ft (2.7m) extension cable

Screw Mount Reflectors



78P
Screw Mount
4.4in x 1.9in
(111.8mm x 48.3mm)



AR3
Screw Mount
3in (76.2mm) diam.



AR4060
Screw Mount
(40.5 x 60mm)



AR6151, AR6151G
Screw Mount
(chemical resistant
glass cover)
2.4in x 2.0in
(61 x 51mm)



AR46
Screw Mount
(46mm) diam.

Optional Mounting Brackets



MB-18
18mm Bracket,
for use with TA-18



MIB-1
MINI-EYE™
Stainless Bracket
Assembly



MIB-2
MINI-EYE™
Stainless Bracket
Assembly



MIB-3
MINI-EYE™
Standard
Mounting Bracket



MIB-4
MINI-EYE™
18mm
Mounting Bracket

